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but, although thus unsuccessful in attaining the great object for which we left England, I trust that the result of our exploration, as showing, at least, where the missing expedition is *not*, will not have been without its use as a contribution to the solution of this important and deeply interesting question. Added to the explorations of those who preceded us in the same direction of the field of search, I think they can leave but little doubt that Franklin has not gone by Cape Walker, but taken the northern route, and has proceeded to an advanced W. long., and is now to be sought for from the westward. I cannot conceive the possibility of Fury Beach, as the only depôt known to Sir John Franklin, remaining unvisited up to this time, had his party been imprisoned anywhere in the Arctic Seas, within 500 miles of it. The chief acquisition, in a geographical point of view, of our late expedition has been the discovery of a passage from Regent Inlet into the Victoria Channel of Rae, *thus supplying an important link to prove the existence of a north-west passage along the coast of North America* actually effected by the united labours of British navigators. To this may be added the contribution of some additional facts regarding the various coast-lines and the determination of the physical aspect of the extensive land lying to the W. of North Somerset.

VIII.—*Sir John Franklin, the Sea of Spitzbergen, and Whale-fisheries in the Arctic Regions.* By AUGUSTUS PETERMANN, F.R.G.S.

Read November 8, 1852.

SIR EDWARD BELCHER, having been so fortunate as to meet with an unusually open season, has passed up Wellington Channel, and the search on the track of the missing vessels may be considered to have now, for the first time, actually commenced. It must be borne in mind, however, that it was in 1846 when Sir John Franklin sailed up this channel, and that, wherever he may have been arrested, it has taken him six years—if not lost in the interim—to reach that point. Considering the labour and time required in the search for traces, even of such conspicuous objects as cairns erected only last year,—as have been described in the recent despatches,—one may reasonably assume that it may take Sir Edward Belcher not less than two or three years, even under favourable circumstances, to obtain a satisfactory result in his search.

The circumstance that nothing has been heard from the Investigator, under Captain M'Clure, for the last two years, seems to

suggest that this navigator has not been successful in the region between Behring Strait and Banks Land, and the opinion that Sir John Franklin would ultimately be found on the Asiatic side of the Polar regions becomes more and more probable.

Is Sir Edward Belcher's Expedition to be looked on as exhaustive? and are we to be kept in painful suspense about the missing expedition for three or more years longer? Belcher's, M'Clure's, and Inglefield's Expeditions only comprise one-third of the circumference of that portion of the Polar regions where Sir John Franklin must have been arrested, and the remainder of this region is at present altogether unsearched. As this is just the portion where I consider it most probable that Franklin has been arrested, and also where my proposed route of search is directed to, I am desirous of again drawing attention to my plan, by stating some geographical facts respecting the Arctic Sea directly to the N. of our own shores, surrounding Greenland, Spitzbergen, and Nova Zemla, the scene of the earliest exploits in Arctic discovery and of most important and profitable whale-fisheries.

In the 17th century the Dutch formed the settlement of Smeerenberg on the northern coasts of Spitzbergen, the houses of which were brought, ready prepared, from Holland. This was the grand rendezvous of the whale-fleets, and abounded during the busy season with good inns, and with many of the conveniences and enjoyments of Amsterdam. It is particularly mentioned, that the sailors were every morning supplied with what the Dutchmen regarded as a great luxury—"hot rolls"—for breakfast. Batavia, under the Equator, and Smeerenberg, about 10° from the Pole, were founded nearly at the same period, and it was for a considerable time doubted whether the latter was not the most important establishment of the two. But times have changed; these seas have been abandoned by whalers for more profitable regions, and tracts, at one time well known, have become almost "*terræ incognitæ*."

The nomenclature of these seas is so undecided, the names "Sea of Greenland" and "Sea of Spitzbergen" are so intermixed, that I cannot but think it would be desirable to give each of these names their due locality, especially as the sea between Spitzbergen and Nova Zemla has no name, and cannot be referred to except by long parentheses. I therefore propose, in the following remarks, to call the sea between Greenland and Spitzbergen the *Sea of Greenland*, and that between Spitzbergen and Nova Zemla, the *Sea of Spitzbergen*.

The latter is by far the widest, and is indeed the only *oceanic* opening towards the North Pole and to the chief Polar regions, and on that reason alone may be considered to be the easiest and most practicable of all openings for vessels into the Polar regions.

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art to illustrate A. Petermann's paper on the Sea of Spitzbergen &c.

(Taken, by permission, from the works of the Haldyrt Society.)



It is likewise the nearest and most accessible of all the openings to Europe. Nevertheless, arctic writers and geographers have generally assumed an impenetrable ice-barrier to stretch across this sea, and they have pronounced it to be altogether impracticable for navigation. This assumption I consider to be groundless, and as resting upon prejudice.

In supporting my views on this point I need not here call to my aid the elements of Physical Geography, nor adduce recent important discoveries made by the Russians or others, but I will simply draw attention to certain facts contained in published works of the highest authority, by English authors well known and still living,—facts which appeal to the common sense of every person, and can be easily understood.

Captain (now the Rev. Dr.) Scoresby, whose work on the Arctic Regions is one of the most able and comprehensive we possess, seems evidently at a loss, when referring to what I propose to call “the Sea of Spitzbergen.” He himself never visited it, not having extended his voyages to the E. of Spitzbergen. His information, therefore, is not sufficiently precise. Still, from what he says directly on the point under consideration, and repeats in one of the Parliamentary Papers of the present year (p. 161), we must conclude that he assumes the Sea of Spitzbergen to be locked up by an impenetrable ice-barrier. Diligently as I have gone over his work, I cannot find a tittle of evidence adduced to prove the foundation for such an assumption. On the contrary, we read the following at p. 180 of vol. ii. :—

“Some adventurous persons sailed to the east side of Spitzbergen, where the current has a tendency, it is believed, to turn the ice against the shore: yet here finding the sea on some occasions open, they attempted to prosecute the (whale-) fishery, and it seems with some success, a great whale-fishery having been made near Stans Foreland in the year 1700.”

Surely a sea where a “great whale-fishery” was once carried on, cannot be locked up by an impenetrable ice-barrier, and cannot be more difficult to navigate than Baffin Bay, or any other seat of the whale-fishery! So far, therefore, as Captain Scoresby’s evidence goes, the Sea of Spitzbergen may be considered as navigable.

Captain Beechey, the editor of the narrative of the voyage of Buchan and Franklin towards the North Pole, in like manner, neither directly nor explicitly states his opinion on the subject, but simply records the results of voyages in that region in a clear and conscientious manner, which cannot be too much commended. His octavo volume contains altogether a greater body of information respecting the sea immediately around Spitzbergen than any other work, and a careful perusal of it is indispensable to those interested in the subject under consideration.

In referring those interested in the matter to the work itself, I cannot, however, refrain from citing one passage (p. 349) from a communication of Mr. Crowe, the British Consul at Hammerfest, and establisher and proprietor of a British settlement at Spitzbergen; who says:—

“ M. Sharostin, an intelligent Russian, with whom I have frequently conversed, actually passed 39 winters on Spitzbergen, and resided there for 15 years without having once left the island. He declares, that during his residence he invariably found the coasts free from ice for four, and sometimes for five, months in every year. I am enabled to add, that my own vessels have frequently navigated the coasts from Ryke Yse’s Islands, the S.E. extremity, round the west coast, to the Seven Islands at the N.E. extremity, and that four times out of six they might have circumnavigated Spitzbergen.”

Is it possible that a more favourable prospect for the success of an arctic expedition can be offered than is contained in the preceding remarks? Where is there another portion of the Polar region so near this country and so easily navigated? Spitzbergen extends beyond the 80° of latitude, and forms the highest country in latitude yet reached in either hemisphere,—but where is there another group of islands which can be circumnavigated in a like manner? Compare it to the Parry group, though in latitude 75°, and the difference is obvious.

In short, the assumed difficulties in the Spitzbergen Sea are groundless, and rest upon a prejudice, dating back to the voyage of Capt. John Wood in 1676. The question of the north-east passage had failed to occupy attention for upwards of sixty years, when it was revived by various reports, partly from Holland, but chiefly by the publication of a paper in the “ Transactions of the Royal Society of London in 1675,” in which it was stated that a vessel had sailed several hundred leagues to the north-east of Nova Zemla, and that the sea was there found free from ice. It was also reported, that some Dutch vessels had circumnavigated Spitzbergen, and that one had even reached the latitude of 89, and found the sea there quite free from any incumbrance. The subject found a zealous advocate in the person of Captain John Wood, who advanced many reasons in support of his opinion. The enterprise was patronised by Government, and Captain Wood was sent out in the *Speedwell*.

“ The Journal of Captain Wood,” Sir J. Barrow observes, “ is so meagre that it is impossible to make out his track.”

He appears to have held for the coast of Nova Zemla, and had the misfortune, when in sight of it, to run upon a rock and lose his vessel. He was able, however, to return safely to England, when he discredits in the lump all the former instances of having reached high northern latitudes, in the following words:—

“ So here the opinion of William Barentz was confuted, and all the Dutch

relations, which certainly are all forged and abusive pamphlets, as also the relations of our countrymen."

This unjust way of dealing, however, has met with the reprobation it deserves by every writer on the subject. The Honourable Daines Barrington says:—

"In justice to the memories of both English and Dutch navigators, I cannot but take notice of these very peremptory and ill-founded reflections made by Wood, and which seem to be dictated merely by his disappointment, in not being able to effect his discovery."

Captain Beechey (p. 295) says—

"The failure of this expedition is attributed by Wood to the error in which he was led by following the opinion of poor Barentz, but in what way we are not told, nor can we easily imagine; for, if that worthy navigator gave any opinion, it would certainly be against the probability of a passage by the route pursued by Wood. Indeed, Wood seems to have been greatly at a loss for an excuse for his failure, as we find him accusing all the statements of both Dutch and English as false, and asserting, in the most unaccountable manner, that Nova Zembla was connected with Spitzbergen on the north, and with the coast of Tartary on the south, notwithstanding it was well known that both its extremities had been rounded on several occasions. In short, he seems to have been determined that, as he could not effect the passage himself, he would create an imaginary barrier which should deter any other person from renewing the attempt. We cannot suppose that these unfounded assertions had much weight in the minds of any sensible persons; but certain it is that the ardour which the subject formerly excited appeared from that period entirely to subside."

Thus far Captain Beechey. Captain Wood, among other things, asserts, in his endeavour to represent those regions as gloomy as possible, that Nova Zemla is covered with eternal snow and ice, and contradicts himself in another place by saying that the soil was thawed two feet deep.

The object of Captain Wood's statement cannot, perhaps, be more properly and correctly interpreted than it has been by Captain Beechey, when he says that Wood was determined "to create an imaginary barrier, which should deter any other person from renewing the attempt." True it is that the interesting problem of the north-east passage was really given up, and has not been revived even in the eras of the most enthusiastic Arctic enterprise. The groundless and false assertions of that unsuccessful navigator seem, ever since 1676, to have influenced the minds of learned as well as practical men, in a degree so as to lead them to consider the only oceanic opening into the Polar Basin as impracticable! And the "imaginary barrier" is even in these our enlightened days held up, by some, as a fact established beyond doubt!

When it is considered that no ice whatever is met with in that region till Bear Island, a distance of 1500 miles from Woolwich, is reached, whence to the 80th parallel there is only 500 miles, and that all this can be performed by a steamer in less than a fortnight at a cost trifling if compared with the millions which have

been spent in Arctic and Antarctic undertakings, and when at so trifling a risk a problem can be solved which, irrespectively of Franklin's expedition, is of the highest geographical interest, and discoveries would probably be made of great importance to the whale-fisheries of the country,—then, indeed, it must be looked on as a disgrace in the history of Arctic navigation, that such an undertaking has not long since been accomplished. The very fact that no suitable expedition has been sent in this direction, and that never any fair attempt has been made to proceed northwards in that sea, ought to have stimulated us to such an exertion. If one only of the eleven vessels, engaged in search of Sir John Franklin in 1850 in Baffin's Bay and Lancaster Sound, had been dispatched in this direction, it would probably have eclipsed, in Geographical discovery alone, all Polar Expeditions as yet undertaken.

The Sea of Greenland has been nearly—what the whalers call—“fished out;” while the whales in the Sea of Spitzbergen have scarcely yet been disturbed. Even in the open waters to the south of the Sea of Spitzbergen whales have been frequently seen in recent times, by British trading vessels on their route to Archangel. Directly opposite, or beyond the Sea of Spitzbergen, on the coasts of the New Siberian Islands, where the sea is very deep, we know that black and white whales occur, and that ribs of whales are frequently found on the land. Prodigious indeed must be the number of whales in the Polar Basin, when their appearance at some of its outlets is considered:—in Wellington Channel the number seen was great, and to the N. of Behring Strait still greater. We learn from a paper printed by the Admiralty, that there have been engaged in the American whale-fishery about Behring Strait, during the last three years, on an average 150 vessels every year.

“All our commerce with what is called ‘the East,’” says the Secretary of the United States Navy, “is not so valuable as the Behring Strait whale-fishery. In the first two years, 1849 and 1850 (for which the statistics are returned), more American seamen were engaged in that small district of the ocean than are employed in our whole navy at any one time; in these two years the hardy mariners fished up from the bottom of the sea, and by their own energy created and added to the national wealth, the value of more than eight millions of dollars.”

Let the Americans only get the hint of another snug whaling corner in these Arctic Seas and they will not be slow in treating with contempt the fables of the so-called “*impenetrable ice-barriers*.” Will England allow herself to be anticipated—as she has been in the Behring Strait whale-fishery—also in the Sea of Spitzbergen, which is not more distant from the British whale-fishing ports than Cape Farewell, the S. point of Greenland? *

* Spitzbergen is close at home—almost at our very doors—but then Behring Strait is not far from Vancouver Island. The real cause of the decrease of the

And lastly, as to Geographical discovery. When Sir Edward Parry in boats attained the latitude of nearly 83° , to the N. of Spitzbergen, and when the current alone forced him to return, who will deny that that determined navigator might not have reached the Pole, and planted the English colours on that spot, had he had the assistance of steam? The whole of that remarkable voyage only took six months from the River Thames to the latitude of 83° and back, and only cost 9977l.* Who will deny that an expedition now sent out towards the Pole through the Sea of Spitzbergen, commanded by an experienced and determined navigator, would not reach the Pole, and make other discoveries, important to commerce and geographical science, even in one single season? The distance from Woolwich to the North Pole is no further than from the same point to Disco Island, and the extent of the *ice-voyage* is in both cases about equal.

Enough has been said to show the importance of drawing attention to the Sea of Spitzbergen as the great opening into the Polar Basin, and, at all events, I cannot but think that, after what has been adduced in the preceding remarks, the investigation of this Sea will be considered as a great *geographical* desideratum, and, as such, I have been desirous of bringing this communication before the Royal Geographical Society of London.

Postscript.

EXTRACTS FROM LETTERS RECEIVED BY MR. PETERMANN FROM CAPTAINS OF WHALING SHIPS AND OTHERS.

No. 1. "In the year 1845, I had the misfortune to have my ship stove, and, in consequence, was obliged to seek a harbour of refuge in Spitzbergen to repair my ship. It was about the 10th of May, and I was in lat. $79^{\circ} 53'$ N., long. 10° E.; it was an unsafe place, but I had no other alternative, and it answered my purpose. The weather was remarkably fine at the time; it was quite evident to the north of us there was a great deal of water, because there was a strong swell in that direction. I have often thought the fish came from the sea between Spitzbergen and Nova Zemla, but dare not take the responsibility to clear up that point. I should be sorry indeed for another nation to take the cause up. I have found, by experience, that the current in the Greenland seas sets to the southward at the rate of 8 miles in 24 hours; in a hard gale from the N.E. I have drifted 20 miles in 24 hours. Drift-wood is repeatedly found as far north as 80° , some of it with the mark of the axe quite fresh upon it; indeed, on the coast of Spitzbergen, large quantities are found."

No. 2. "I found the floes to the east of Spitzbergen quite different from the ice to the westward, it being only like Davis Straits floes, about 4 or 5 feet thick. The masters of the Hammerfest sea-horse vessels told me, that in September all the ice was away, and nothing but clear water on the east side

British and the increase of the American whale-fisheries may be possibly laid at the door of the different laws of partnership in the two countries.—ED.

* How many hundreds of thousands of pounds, how many lives, how many years, and how many vessels has it not cost to attain only the latitude of 76° on the American side!

of Spitzbergen. I believe we might stop in Greenland much longer than we do; I have been until the 9th September, but I do not see why we cannot continue as long as they do in the Straits."

No. 3. "In 1848, in the early part of May, I was in lat. $82^{\circ} 00'$ N. and in long. $15^{\circ} 00'$ E. In the N. and W. of that point was a complete barrier of ice, but to the eastward, as far as the eye could reach on a clear day, nothing but a sea of water was to be seen."

IX.—*Report on the Return of the Isabel from the Arctic Regions.*
By Commander ED. A. INGLEFIELD, F.R.G.S. (*Gold Medallist.*)

Read November 22, 1852.

MR. PRESIDENT,—Having at your desire prepared the following account of my recent voyage to the Arctic regions, for the information of the Society, I may perhaps be expected, in the first place, to make some allusion to the circumstances which induced me to undertake such a voyage, when so many vessels were already employed there under Government. Briefly, then, I may state that the *Isabel*, screw schooner, of 140 tons, had been originally fitted by Lady Franklin, for a voyage to Behring Strait, and that although she was assisted by the subscriptions of the President and Fellows of this Society, as well as by a few other warm-hearted persons, yet by far the largest share of the expense was defrayed by her Ladyship.

This vessel, strengthened, equipped, and fitted with a 16-horse high-pressure engine to work a screw-propeller, having been from unavoidable circumstances thrown upon her hands, she forthwith offered her to the Lords Commissioners of the Admiralty as an addition to the squadron already employed in the Arctic Seas, where from her strong build and easy management she would do important service. Their Lordships, however, declined the offer, and her spirited owner then proposed to *give* her to any competent person who would convey to Sir Edward Belcher the ample store of provision which had been placed on board, and who was to remunerate himself for all further outlay, in seamen's pay, occasional refitments, and foreign expenses, by the sale of the vessel on her return to England.

Though at this time the season was considerably advanced for commencing such a voyage, Sir Edward Belcher's squadron having sailed nearly three months previously, I accepted the offer on those terms, but on the distinct understanding that I might devote my efforts in search of the missing expedition in any direction that I might deem most expedient; and with the further proviso that I should be able to obtain not only the necessary leave of absence from the Admiralty, but also their Lordships' permission to complete the fittings and stores still required for such a voyage at